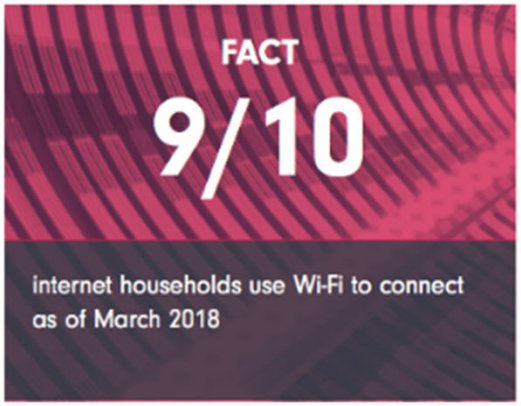
# 5.9 GHz: The Best Opportunity for Better Wi-Fi Fast

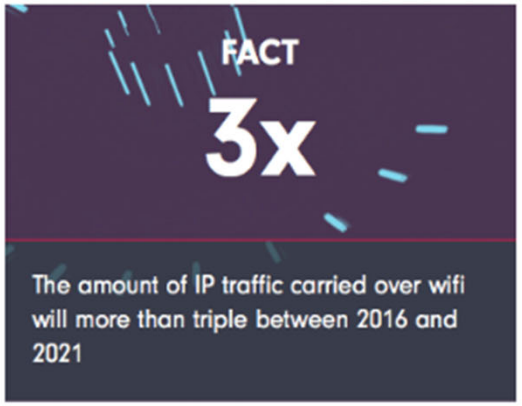
ncta

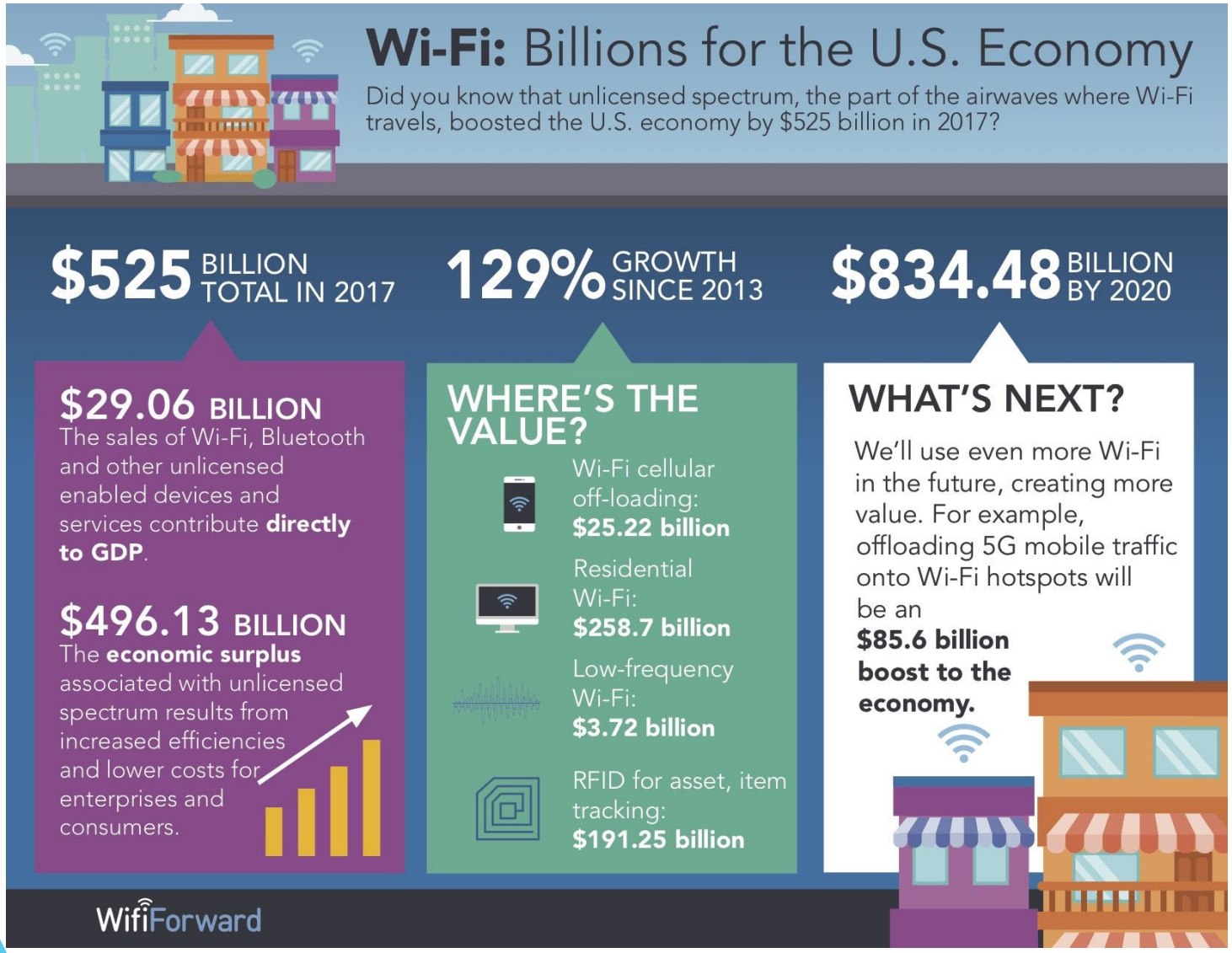
THE INTERNET & TELEVISION ASSOCIATION

# WI-FI IS HOW AMERICANS EXPERIENCE THE INTERNET

- Since its debut in 1985, Wi-Fi has become a staple in American life. Wi-Fi networks, including the extensive networks deployed by cable operators, now carry the majority of U.S. wireless traffic. Cisco predicts that Wi-Fi will carry 52 percent of U.S. internet traffic by 2021, while cellular services will carry only 8.8 percent.
- As of March 2018, the overwhelming majority of U.S. broadband households—*9 out of 10*—used Wi-Fi to connect to the internet.


Wi-Fi: Billions for the U.S. Economy
Did you know that unlicensed spectrum, the part of the airwaves where Wi-Fi travels, boosted the U.S. economy by $525 billion in 2017?
$525 BILLION TOTAL IN 2017
129% GROWTH SINCE 2013
$834.48 BILLION BY 2020
$29.06 BILLION
The sales of Wi-Fi, Bluetooth and other unlicensed enabled devices and services contribute directly to GDP.
$496.13 BILLION
The economic surplus associated with unlicensed spectrum results from increased efficiencies and lower costs for enterprises and consumers.
WHERE'S THE VALUE?
Wi-Fi cellular off-loading: $25.22 billion
Residential Wi-Fi: $258.7 billion
Low-frequency Wi-Fi: $3.72 billion
RFID for asset, item tracking: $191.25 billion
WHAT'S NEXT?
We'll use even more Wi-Fi in the future, creating more value. For example, offloading 5G mobile traffic onto Wi-Fi hotspots will be an $85.6 billion boost to the economy.
WifiForward

# WI-FI SPECTRUM NEEDS

- American consumers and businesses need additional mid-band Wi-Fi spectrum as soon as possible, just to keep pace with today's consumer and enterprise needs.
  - Wi-Fi Alliance study: the U.S. will need between 788 megahertz and 1.6 gigahertz of new mid-band unlicensed spectrum by 2025 to accommodate growing demand for Wi-Fi.
  - Qualcomm study: "regulators should plan for around 1280 MHz of unlicensed spectrum centered around the 5 GHz band for use by unlicensed technologies."
- Wi-Fi already powers hospitals operations, hundreds of billions of dollars in financial transactions daily, machine and IoT communications, and other crucial services—and is critical to the success of 5G.

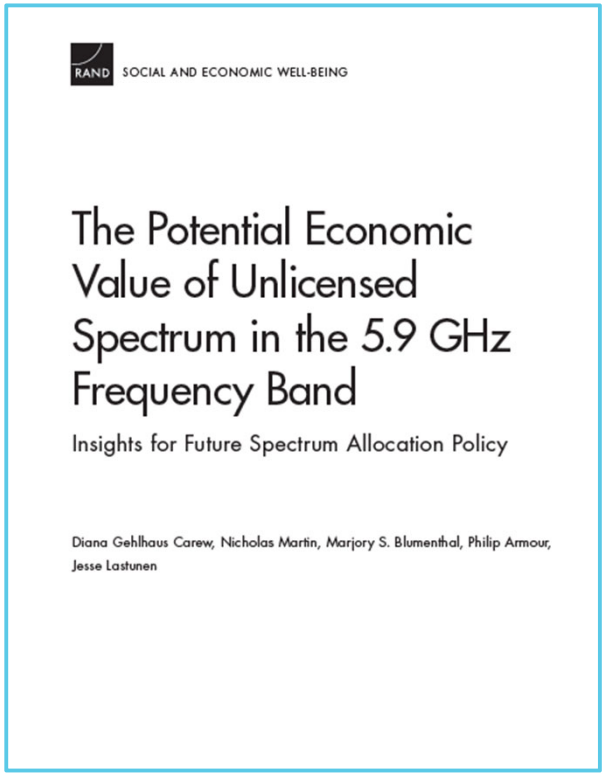
# 5.9 GHZ IS THE RIGHT PLACE TO ADDRESS THE WI-FI SPECTRUM GAP

- A combined 5.8/5.9 GHz band will let U.S. companies deploy next-generation 160-megahertz-wide gigabit Wi-Fi technologies.
- This would be the first widely available contiguous 160-megahertz channel in the U.S.
- Similar propagation to the 5.8 GHz means inexpensive devices will reach the market fast.

# ENORMOUS ECONOMIC VALUE

- Rand study: opening the band for Wi-Fi could add between $60 and $105 billion annually to our nation's gross domestic product.

- In addition to raising GDP, Wi-Fi could add up to $190 billion in consumer and economic surplus to the U.S. economy.



# TODAY'S 5.9 GHZ BAND IS ALMOST COMPLETELY EMPTY

- After 20 years, DSRC has not meaningfully deployed. V2V safety systems are not effective or reliable unless universally deployed in all U.S. cars and trucks.
- There are only 70 pilot deployments in the entire United States.
- Additionally, the DOT's SPaT challenge, which sought to convince states and localities to deploy V2I, records just 216 intersections operational nationwide.

# NCTA'S PROPOSAL

- The best outcome is a proposal to relocate ITS to different spectrum and to re-designate the entire band for unlicensed use.

- Emerging C-V2X services can and should use other spectrum—this is the perfect time to set up the bands correctly, when there are no C-V2X incumbents.

- The FCC should not make the same mistake twice—granting the band to C-V2X would repeat the mistake of 1999 and tie up the band for at least another decade.

# THE WAY FORWARD

- The Commission should—without delay—issue an FNPRM that:
  - (1) Recognizes that past over-regulatory efforts to mandate a particular technology or to reserve the band for particular companies have failed;
  - (2) Finds that substantial changes in the 5 GHz spectrum environment, the market's rejection of DSRC, and the pressing need for additional unlicensed spectrum support a proposal to designate all or a substantial portion of the 5.9 GHz band for unlicensed use; and
  - (3) Seeks comment on whether to allocate other, more suitable spectrum for automotive communications technologies.